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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/668,071	09/22/2000	Kouji Fujiwara	49940(868)	1421
21874	7590	05/03/2005	EXAMINER	
EDWARDS & ANGELL, LLP P.O. BOX 55874 BOSTON, MA 02205			NGUYEN, HAU H	
			ART UNIT	PAPER NUMBER
			2676	

DATE MAILED: 05/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/668,071

Applicant(s)

FUJIWARA ET AL.

Examiner

Hau H Nguyen

Art Unit

2676

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-5 and 7 is/are allowed.
- 6) ☒ Claim(s) 1,6,8-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

1. Applicant's arguments filed December 08, 2004 have been fully considered but they are not persuasive. Response to Applicant's argument is cited in the rejections. In response to Applicant's argument that reference Taniguchi et al. does not teach "substantial impulse-type is carried out," the examiner disagrees because in between two consecutive frames as shown in Figs. 2A and 2B, image is being forced to shut off due to a vertical blanking period and other periods alternatively Ri and Li, and image is turned on in other periods.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In the Background of the Invention on pages 4-7, Applicant only pointed out how to obtain an "impulse-type drive" but did not describe what "impulse-type drive" is. Figs. 12A and 12B does not give enough information.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2676

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1, 8-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Taniguchi et al. (U.S. Patent No. 6,094,216).

Referring to claim 1, Taniguchi et al. teach a stereoscopic image display method comprising the steps of: dividing each of a plurality of parallax images supplied from a parallax image source having parallax image information into stripe pixels; displaying, on a display, a single stripe image by arranging and synthesizing some of the stripe pixels in a predetermined order; displaying a slit pattern consisting of a light-transmission portion and a light-shielding portion arranged at a predetermined pitch on a spatial light modulation element (a shield member) arranged at a predetermined position on the front or rear side of the display; inputting light transmitted through the stripe pixels, corresponding to the right and left eyes of an observer, of the stripe image to the right and left eyes of the observer via the spatial light modulation element; and synchronously displaying the stripe pattern and the slit pattern in units of pixels or scan lines on corresponding scan lines of the display and the spatial light modulation element (a

Art Unit: 2676

driven mechanism). The slit pattern in which the positions of the light-transmission portion and the light-shielding portion replace each other is displayed on the spatial light modulation element (col. 4, lines 24-67). Fig. 6 shows the image device having a backlight 21, and the displayed image (for example, L image or R image) is shut off for a constant period (col. 16, lines 15-30).

As shown in Figs. 2A and 2B, Taniguchi et al. teach the barrier driving circuit 5 displays a first parallax barrier pattern 2A on which light-transmission portions and light-shielding portions each having the width B' are alternately formed in the order of close, open, close, open, close, open, . . . from a point G on the spatial light modulation element 2 (alternatively turning on and off the image). On the next frame, the spatial light modulation element 2 displays a second parallax barrier pattern 2B on which the light-transmission portions and light-shielding portions are alternately formed in the order of open, close, open, close, open, close, . . . opposite to that of the first parallax barrier pattern from the point G (col. 12, lines 23-65) (corresponding to "shutting off image in intervals between continuous frames, where by substantial impulse-type drive is carried out").

In regard to claim 8, with reference again to Fig. 6, Taniguchi et al. teach the spatial light modulation element 2 must have a high contrast and must realize a high-speed driving operation since it separates the right- and left-eye parallax images by means of the parallax barrier pattern formed thereon. When the display 1 and the spatial light modulation element 2 comprise liquid crystal elements (liquid crystal optical shutter), they preferably use the same type of liquid crystal elements since it is easy to assure synchronization due to the same display speed (response speed) and identical driving circuits can be used (col. 14, lines 63-67, and col. 15, lines 1-7).

Art Unit: 2676

Referring to claim 9, Taniguchi et al. teach the spatial light modulation element 2 (the shield member) having a high-speed frame rate of 60 Hz to 120 Hz. As cited above, the shield member is capable of shutting off an image, therefore, it is inherent that the shield member is operable to shut off the image between frames (i.e. during a vertical blanking period).

In regard to claims 10 and 11, as cited above, Taniguchi et al. teach the spatial light modulation element (shield member), which is a liquid crystal optical shutter, having a light-transmission portion and light-shielding portion.

Referring to claim 12, as shown in Fig. 5, Taniguchi et al. teach the display 1 for displaying the stripe image 11 is arranged so that a TN liquid crystal cell 23 between two polarizing plates 22 and 24 is illuminated with light emitted by a backlight 21 having a reflection plate and a light guide plate (col. 15, lines 51-61). As cited above, Taniguchi et al. teach the spatial light modulation element (shield member) arranged at a predetermined position on the front or rear side of the display. Therefore, it is inherent that the display device should also be a reflection type display device.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 6 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taniguchi et al. (U.S. Patent No. 6,094,216) in view of Faris (U.S. Patent No. 5,828,427).

Art Unit: 2676

Referring to claims 6 and 13, as applied to claims 1 and 9 above, Taniguchi et al. teach all the limitations of claim 9, except that the liquid crystal display device is a projection device for magnifying and projecting light.

However, liquid crystal display device used in projection device is common in the art as described in U.S. Patent No. 5,828,427 to Faris. Faris teaches a flat panel display panel having direct and projection viewing modes of operation, and an electro-optical backlighting panel having a light emission state in which light is emitted from the electro-optical panel during the direct viewing mode of operation, and a light transmission state in which externally generated light is permitted to pass through the electro-optical panel without substantial scattering during the projection viewing mode of operation (col. 3, lines 9-17).

Therefore, it would have been obvious to one skilled in the art to utilize the LCD device as taught by Faris in combination with the display device as taught by Taniguchi et al. in order to project images on large viewing surfaces (col. 6, lines 22-25).

Allowable Subject Matter

8. Claims 2-5, and 7 are allowed.

Reasons for Allowance

9. The following is an examiner's statement of reasons for allowable subject matter:

The prior art taken singly or in combination does not teach or suggest, an image display device, among other things, comprising a shield member, which is an endless belt.

The closest prior art, reference Taniguchi et al. (U.S. Patent No. 6,094,216) teaches a shield member, comprising a light-transmission portion and a light-shielding portion.

Art Unit: 2676

However, the shield member as taught by reference Taniguchi et al. is not an endless belt.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hau H. Nguyen whose telephone number is: 571-272-7787. The examiner can normally be reached on MON-FRI from 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on 571-272-7778.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D. C. 20231

or faxed to:

(703) 872-9306 (for Technology Center 2600 only)

Hand-delivered response should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (571)-272-2600.

H. Nguyen

04/28/2005



MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600